SAPAK, K. CZECHOSLOVAKIA

no academic degree indicated

First Clinic for Obstetrics and Female Diseases (I. zenska a porodnicka klinika) Bratislava; Director: Prof. S. STEFANIK, MD.

Bratislava, Bratislavske Lekarske Listy, No 9, Nov 62, pp 516-522.

"The Vegetative Tonus and Excitability of Women in Climacteric" (Preliminary Report)

SKALICKY, J.; SAPAK, K.; RUZICKA, A.

Effect of placental gonadotropic hormones on the genitalia of female adrenalectomized rats. Cesk. gyn. 28 no.1/2:138-141 F '63.

1. Katedra starostlivosti o matku Lek. fak. UK v Bratislave, veduci prof. dr. Sv. Stefanik.
(GONADOTROPINS CHORIONIC) (GENITALIA FEMALE)
(ADRENALECTOMY)

PONTUCH, A.; ZAJACOVA, E.; SAPAK, K.

The problem of the stump after supravaginal amputation of the uterus. Cesk. gyn. 28 no.5:337-342 Je '63.

1. I gyn.-por. klin. Lek. fak. UK v Bratislave, prednosta prof. dr. S. Stefanik.
(HYSTERECTOMY) (CERVIX NEOPLASMS)
(CARCINOMA, EPIDERMOID) (COLPOSCOPY)
(CYTODIAGNOSIS)

PONTUCH, A.; SKLOVSKA, M.; SAPAK, K.

Intrauterine fetal death from data of the 1st gynecological and Obstetrical Hospital in Bratislava for the years 1951 through the 1st half of 1962. Cesk.gynek. 28 no.8:525-529 O '63.

1. I. zen. a por. klin. Lek. fak. UK v Bratislave, prednosta prof. dr. S. Stefanik.

PONTUCH,A.; CATAR,G.; ELISCHEROVA, K.; BARDOS,A.; ZAJACOVA, E.; SKLOVSKA,M.; SAPAK,K.; SZOLD,L.

Role of toxoplasmosis and listeriosis in the causes of premature labor. Cesk. gynek. 29 no.4:262-265 My'64

1. I. gyn.-por. klinika Lek. fak. UK [University Komenskeho] v Bratislave (prednosta: prof. dr. S.Stefanik); Ved.lab. paraz. Lek. fak. UK [University Komenskeho] v Bratislave a Ustav epid. a mikrob. Lek. fak. UK [University Komenskeho] v Bratislave (prednosta: doc.dr. J.Karolcek).

SAPAK, K.; SKLOVSKA, M.; PONTUCH, A.

Little known causes of premature labor. Cesk. gynek. 29 no.6:466-469 Ag '64.

1. I. gyn.-por. klin. Lek. fak. Karlovy University v Bratislave (prednosta prof. dr. S. Stefanik).

SAPAK, K.

Use of corticoids in gynecology and obstetrics. Cesk. gynek. 30 no.1:22-25 Mr'65.

1. I. gyn.-por. klinika Lekarske fakulty University Komenskeho v Bratislave (prednosta: prof. dr. S. Stefanik).

PONTUCH, A.; SAPAK, K.; SKLOVSKA, M.; SASKO, A.

Consultation services of allied disciplines in our clinical material. Cesk. gynek. 30 no.9:708-711 N '65.

1. I. gyn.-por. klinika Lekarske fakulty Univerzity Komenskeho v Bratislave (prednosta prof. dr. S. Stefanik).

SAPAK, K.

A contribution to the effect of oxytocin on the sugar metabolism. Bratisl. lek. listy 45 no.9:554-557 15 My'65.

1. I. zenska a porodnicka klinika Lekarske fakulty Univerzity Komenskeho v Bratislave (veduci:prof. MUDr. S. Stefanik).

BARDOS, A.; SAPAK, K.

Effect of spasmolytic drugs on the course of labor and normal uterine contractility. Cas. lek. cesk. 103 no.35:957-961 28 Ag '64.

1. I zenska a porodnicka klinika v Bratislave (prednosta prof. dr. S. Stefanik).

SAPALA, C.

Comparing synchronous and asynchronous motore. p. 153

Wiadomosci Elektrotcchniczne. (Stowarzyszenie Elektrykow Polskich, Centralny Zarzad Energetyki, Centralny Zarzad Przemysly Kablowego) Warszawa, Poland Vol. 15, no. 7, July 1955

Monthly list of East European Accessions (EEAI) LC, Vol. 9 no. 2, Feb. 1960

Uncl.

EWT(m)/EPA(s)-2/EPF(c)/EWP(v)/EWG(v)/EPF(n)-2/T/EWP(j)/EPR/EPA(bb)-2/

TITLE: A method for producing an epoxyfuran binder. Class 39, No. 168420

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 58

TOPIC TAGS: epoxy resin, transparent plastic, bonding material

ABSTRACT: This Author's Certificate introduces a method for producing an amine-

SUBMITTED: 20Oct62 ENCL: SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 1/1

ACCESSION NR: AP4041343 S/0115/64/000/005/0024/0024

AUTHOR: Remizov, O. V.; Sapankevich, A. P.

TITLE: Scheme for detecting a hot spot in a wall

SOURCE: Izmeritel'naya tekhnika, no. 5, 1964, 24

TOPIC TAGS: hot spot, hot spot detector, film type boiling

ABSTRACT: The scheme depends on the variation of electric resistivity with temperature. A metal "specimen" introduced into a column of boiling water (and also used as an electric heater) will have a higher temperature at the top. A bridge circuit is connected to point 2 (see Enclosure 1) through a special high-pressure bushing (design sketch supplied); the bridge unbalance voltage is made to automatically turn off the power heating the water. Such a scheme may protect the heat-producing surface from formation of a hot spot when the boiling reaches its critical point and changes into a vapor-film type. Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: none

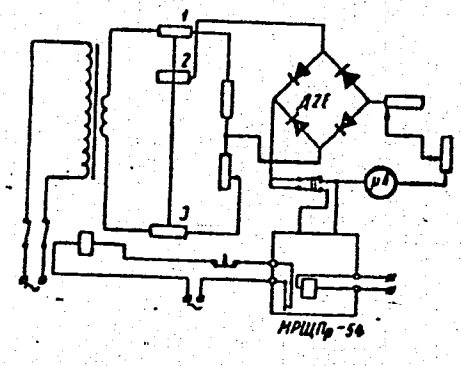
SUBMITTED: 00 ENCL: 01

SUB CODE: EC, IE NO REF SOV: 000 OTHER: 000

Card 1/2

ACCESSION NR: AP4041343

ENCLOSURE: 01



A scheme for detecting hot spot on a heat-producing surface

Card 2/2

SAPANKEVICH, P. V.

"Biology of the Blooming and Fruit-Bearing Capacity of the Spindle Tree." Thesis for degree of Cand. Agricultural Sci. Sub. 18 May 49, Inst of Forestry, Acad Sci USSR.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

SAPANKEVICH, P.V.

Procurement of roots of the spindle tree and its natural regeneration. Trudy Inst. lesa 46:44-46 '58. (MIRA 11:6)

1. Bryanskiy lesokhozyaystvennyy institut.
(Spindle tree)

COUNTRY : USSR
CATEGORY : Forestry. Forest Cultures K

ABS. JOUR. : RZhBiol., No. 2, 1959, No. 6175

AUTHOR : Sapankevich, P.V.
INST. : Forestyy Institute AS USSR
TITLE : Ripeness of Seeds and Duration of Their Dormant Stage.

ORIG. PUB. : Tr. In-ta lesa AN SSSR, 1958, 46, 142-147

ABSTRACT : The processes occurring during the seed ripening are described, criteria are established for different degrees of ripeness of the fruit and seeds of the European spindle tree and the warty spindle tree, and soil germination of their seeds prepared for sowing by different methods, depending on the ripeness, is considered. It is shown that the best ripeness of the spindle tree seed is reached in the second phase of maturity

CARD: 1/2

30(1) SOV/26-59-5-31/47

AUTHOR: Sapankevich, P.V.

TITLE: The Indoor Flowering of a Ficus

PERIODICAL: Priroda, 1959, Nr 5, pp 111 - 112 (USSR)

ABSTRACT: The author describes flowering of a Ficus elastica Roxl. Although an unusual event in a northern country, it occurred to A.I. Grishin (presumably at Bryansk) who had a 3-year-old specimen of this plant, which he kept at home in a poor lighted room with a temperature between 8 and 24° C. It flowered once only (in 1953/54), but not since it was transferred to the Bryansk Forestry Institute, where conditions may have been different. There is 1 diagram.

ASSOCIATION: Bryanskiy lesokhozyaystvennyy institut (Bryansk Forestry Institute)

Card 1/1

SAPANKEVICH, P. V., Doc Biol Sci (diss) -- "Standstill of seeds of certain woody and scrub plants". Krasnoyarsk, 1960. 42 pp (Acad Sci USSR, Siberian Dept, Inst of Forestry and Wood Fiber), 130 copies (KL, No 14, 1960, 129)

SAPANKEVICH, P. V.

Dissertation defended for the degree of Doctor of Biological Sciences at the Institute of Forest and Wood; Siberian Branch

"Dormancy of the Seeds of Several Wood and Brush Plants."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

SAPANKEVICH, P.V.; MAKSIMOVA, N.A.; KHOMENKO, B.P.

Effect of aqueous extracts from the rhyzomes of Bermuda grass on the germination of some crop plant seeds and the growth of their rootlets. Agrobiologiia no.6:915-916 N-D '65.
(MIRA 18:12)

1. Uchebnoye khozyaystvo "Kommunar" Krymskogo sel'skokhozyaystvennogo instituta imeni M.I.Kalinina.

USSR / Forestry. Dendrology. K-3

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72795.

Author : Sapankevich, Z. F.
Inst : Bryansk Silviculture Institute.
Title : Vernation and Bud Development of C. Avellana.

Orig Pub: Tr. Bryanskogo lesokhoz. in-ta, 1956, 7, 125-131.

Abstract: By observations in Bryansk Oblast, it was established that three types of buds are formed on young shoots of C. avellana during spring and summer. From some buds, vegetating shoots are developed, from others - male inflorescences, from still others - rooted vegetating shoots with 3-8 leaves, which carries the fruit group upwards. Meristematic tubercles in the axil of the leaf rudiments are established at the end of June; toward autumn, they form 2-5 bud tegulae and, in that condition,

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USSR / Forestry. Dendrology. K-3

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72795.

Abstract: pass through the first winter. From May of the following year, the meristematic tubercles are completely differentiated in the developing axillary buds and pass into the second winter in this manner. In spring they form vegetating shoots. Vernation of the amenta begins after cessation of active growth of the shoot. In 2-3 months after the male inflorescences are completely formed, female inflorecences begin to form. The dynamics of the flowering of C. avellana are described. The existing opinion on the bilocular ovary in C. avellana is refuted. In the earlier stages of the development of the pistil and ovary, it is found more often along 4 ovules and, at the moment of ruition, two of them remain. Two other ovules remain underdeveloped. As a rule, of the

Card 2/3

83786

3,2200 3002

S/124/60/000/008/001/011
A005/A001

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 8, p. 2, # 9758

AUTHOR: Sapar, A.

TITLE: On Certain Problems of the Motion of an Artificial Earth's Satellite

PERIODICAL: V sb.: Priroda i matem. Vol. 1, Tallin, 1959, pp. 21-43 (Estonian; Russian and English summaries)

TEXT: The author broaches in his article some problems in connection with the motion of an artificial earth's satellite. In the first part of the article, the problem is considered of launching a satellite into the orbit by means of an accelerating rocket, in the general case a multistep one. It follows from the calculations that the variation in time of the angle of pitch (the angle between the horizontal plane and the direction of the reactive force) under certain simplifying assumptions is not dependent on the fuel combustion conditions. The angle of pitch can be controlled by the direction of the gas stream flowing out of the nozzle. It is evident that the combustion with maximum intensity is most effective, because the expenditure for fuel transportation in the gravity field

Card 1/3

On Certain Problems of the Motion of an Artificial Earth's Satellite

decrease in this case. The solution of the problem in explicit form is complicated in the case of a multi-stage rocket booster, and it is expedient to solve the problem in implicit form. As a solution of the problem, the boundary curve of a family of implicit functions appears. In the second part, formulae are given for determining the instantaneous orbit and formulae for determining the variations of the instantaneous orbit. It is shown that the secular perturbations of the perigee distance from the ascending node and of the longitude of the ascending node are caused by the noncentrality of the gravitation field in consequence of the oblateness of the Earth. The total energy of the artificial Earth's satellite certainly does not decrease hereat. In the third part of the article, the evolution of the orbit is shown. The orbit of the satellite will tend to the circular shape in consequence of the air resistance; hereat, the altitude of the perigee varies slowly, essentially more slowly than that of the apogee. To a first approximation, the instant of the attainment of the circular orbit shape may be assumed to be the end of the satellite's lifetime. In the fourth part, problems are considered in connection with the visible motion of the satellite in reference to the observer at a definite point of the globe.

83786

S/124/60/000/008/001/011
A005/A001

On Certain Problems of the Motion of an Artificial Earth's Satellite

Formulae are given for the approximate forecasting of the time point of culmination, the azimuth, and the angle of elevation of the satellite on the following day.

Summary

Translator's note: This is the full translation of the original Russian abstract.

Card 3/3

S/035/61/000/002/015/016
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1961, No. 2, p. 68. # 2A549

AUTHOR: Sapar, A.

TITLE: On the Neutrino Theory of Elementary Particles

PERIODICAL: "Publikatsii Tartusk. astron. observ.", 1960, Vol. 33, No. 4, pp. 221 - 280 (Engl. summary)

TEXT: On the basis of the two-component neutrino equation in the form of Weyl's equation, the author derives the Heisenberg non-linear formula for elementary particles. Mechanics of special relativity theory is briefly expounded, which is due to the condition of existence of invariant function of action. Formulae for photon and graviton fields are derived. Motion of a material point in a central-symmetric static gravitational field is considered. It is pointed out that the formalism employed by the author is free of Schwarzschild singularity. It leads to correct results for all three conclusions of the relativity theory (peri-

Card 1/2

On the Neutrino Theory of Elementary Particles

helion motion, light beam deflection, and red shift in a gravitational field) proved experimentally and yields moreover interesting results for the mass defect of a particle being in the field of other particles. There are 10 references.

From author's summary

Translator's note: This is the full translation of the original Russian abstract.

S/058/61/000/004/001/042
A001/A101

AUTHOR: Sapar, A.

TITLE: On the neutrino theory of elementary particles and fields

PERIODICAL: Referativnyy zhurnal. Fizika, no 4, 1961, 31-32, abstract 4A360 ("Publikatsii Tartusk. astron. observ.", 1960, v 33, no 4, 221-280, Engl. summary)

TEXT: This is an attempt of constructing fields and elementary particles with the aid of a single field of "primordial matter". It is presumed that this field is the neutrino field and is described by the equation of two-component neutrino in the form of Weyl equation. Using the method of doubling the space of states, the author derives the Heisenberg non-linear equation for elementary particles, and using the operation of multiplication of presentations (de Broglie fusion theory) he derives equations for electromagnetic and gravitational fields. In both cases, side-by-side with wave equations there appear additional equations which characterize the photon and graviton as being formed out of the particles of neutrino "primordial matter". The additional equation for the electromagnetic field assures its transverse nature. For the gravitational field, the analogous

Card 1/2

On the neutrino theory of elementary particles ...

equation means that only states with the eigenvalues of graviton spin being equal to 2 and -2 can exist. The free gravitational field is described by a three-row symmetric complex tensor the spur of which is equal to zero. In considering the problem of motion of a material point in the central-symmetric gravitational field, the author obtains correct values for the advance of perihelion, displacement of the light beam passing past the Sun, and gravitational red shift in stellar spectra.

V. Astaf'yev

[Abstracter's note: Complete translation.]

L 3831-66 EWP(m)/T IJP(c)

ACCESSION NR: AR5014383 UR/0058/65/000/004/B014/B014

SOURCE: Ref. zh. Fizika, Abs. 4B120

AUTHOR: Sapar, A.

TITLE: A question of the tensor of the energy-impulse of the gravitational field and the tensor of superenergy

CITED SOURCE: Publikatsii Tartusk. astron. observ., v. 34, no. 1, 1963(1964), 319-358

TOPIC TAGS: tensor analysis, gravitational field, tensor

TRANSLATION: An analysis is given of the problem of the energy of the gravitational field and of gravitational emanation on the basis of an analogy with the tensor of the energy impulse of the electromagnetic field along with the formulation of the expression for the so-called "tensors of superenergy" of the gravitational field of the quadratic relative to the tensor curve $R_{\mu\alpha\beta\nu}$. In line with the known expressions of Bell, Debevye, Likhnerovich and Robinson, the author introduces a new "tensor of superenergy" having the advantage that it 1) is formulated in space-

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L 3831-66

ACCESSION NR: AR5014383

time with the sources of the gravitational field $T_{\mu\nu}$ and 2) satisfies the condition of conservation $T^{\mu\rho\sigma\tau}{}_{;\rho} = 0$ in the absence of the "gravitational current" $J_{\beta;\rho} = R_{\beta\rho;\tau} - R_{\beta\tau;\rho}$.

"The Tensor of superenergy" is applicable to the finding of the magnitude of superenergy radiating from a point source in a linear approach, and to the characterization of purely emitting gravitational fields, defined by the conditions:

$$R_{\alpha\beta\gamma\delta} R^{\gamma\delta}{}_{\mu\nu} = 0, \quad R_{\alpha\beta\gamma\delta} \overset{*}{R}{}^{\gamma\delta}{}_{\mu\nu} = 0,$$

where $\overset{*}{R}{}^{\gamma\delta}{}_{\mu\nu}$ is the tensor, dual to the tensor of the curve, and is also applicable for determining the tensor of the energy impulse of the gravitational field $T^{\mu\nu}_{g}$.

ENCL: 00

SUB CODE: MA

Card 2/2

CA

Determination of cuminaldehyde in cumin seed. V. Sapera and B. Bitter. *Chem. Listy* 43, 140-1(1949).—Cumin seed (1 g.) was subjected to steam-distn. The first 40 ml. of the distillate were dild. with 40 ml. EtOH and a sample was polarographed after the addn. of 0.1 *N* NH_4Cl. The curve was compared to a standard using cuminaldehyde. M. Hudlický

C.A.

Some derivatives of arecoline. V. Sapurn. Chem. Listy 43, 235-8(1949).—*Arecaidine* (I) (0.2 g.) was refluxed 45 min. with 5 times its wt. of $SOCl_2$ and the $SOCl_2$ stripped *in vacuo*, giving 100% *arecaidine chloride-HCl* (II), m. 240°. II (0.2 g.) in 5 ml. C_6H_6 and 3 equivs. $N_2H_4.H_2O$ were refluxed 4 hrs. on a steam bath, 5 ml. C_6H_6 added, the soln. filtered while hot, and the filtrate evapd. *in vacuo*, yielding 15-20% arecaidine hydrazide (III), m. 157° (from C_6H_6). III also obtained in 70-80% yield directly from arecoline by refluxing it with an equal vol. of $N_2H_4.H_2O$. III (0.31 g.) in 5 ml. abs. EtOH and 0.3 g. BzH in 5 ml. EtOH refluxed 30 min. on a steam bath gave on cooling 60% arecaidine benzylidenehydrazide (IV), m. 210-12° (from EtOH). IV and its acidic hydrolysis products were investigated polarographically. IV is polarographically reducible at the half-wave potential of −1.202 v., with a calomel reference electrode and 0.1 *N* NH_4Cl as electrolyte.

M. Hudlický

C. 1.

Polarographic determination of halogens in organic substances. Vojtěch Šapara (Palacký Univ., Olomouc). *Časopis českého Lékárnictva* 62, 132–4(1949)(in Czech., with Russian, English, and French summaries).—Halogens in org. compds. can be detd. by destroying the org. matter with Na and K, then polarographically detg. and comparing curves with those of known halogenized org. substances.
Oldřich Schek

SAPARA V.

181T17

CZECHOSLOVAKIA/Chemistry - Chromatography Dec 50
Opium

"Chromatographic Separation of Opium Alkaloids," V. Sapara, Biol Inst, Med Faculty, Palacky U, Olomouc

"Casopis Ceskeho Lekarnictva" Vol LXIII, No 9-12, p 293

Discusses possibility of chromatographic prepn of pure morphine and codeine with Brockman's aluminum oxide. Describes isolation by chromatography of alkaloids from dried poppy seed

181T17

CZECHOSLOVAKIA/Chemistry - Chromatography (Contd) Dec 50

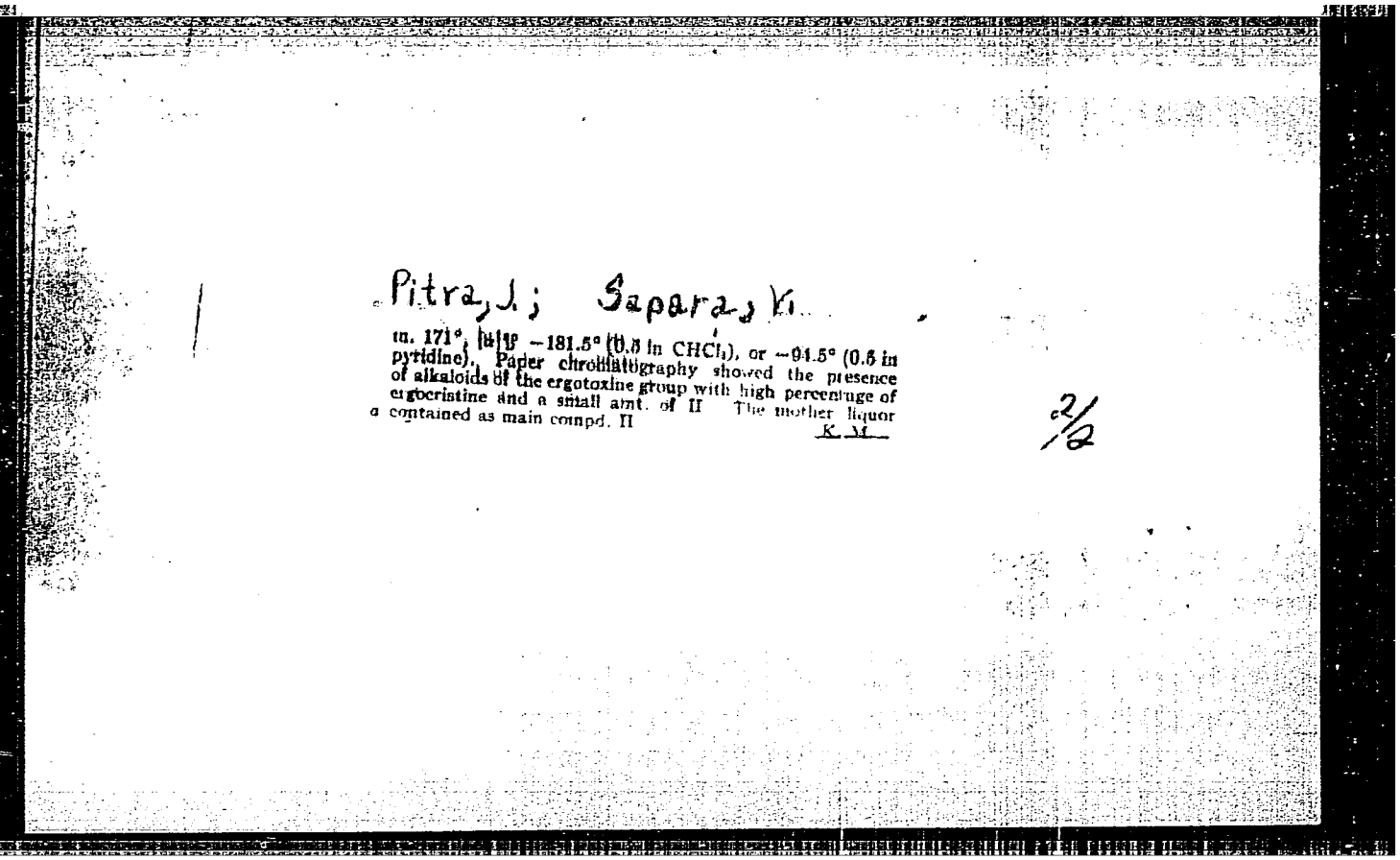
and of Bulgarian opium. Chromatographic sepn of opium bases is suitable especially when small quantities of initial material are used.

181T17

2

Preparation of ergotoxine. J. Pitra and V. Sapara (Farmakon, Olomouc). *Československá farm.* 5, 585-6 (1956).—A modification of the method of Smith and Timmis (*C.A.* 24, 4296) was described: the mixt. of crude alkaloids (100 g.) was dissolved in 250 ml. MeOH, dild. with 3 l. Et_2O, the ppt. sepd. by filtration, and washed with 300 ml. Et_2O. To the filtrate was added in small portions under intensive stirring a soln. of 25 g. tartaric acid in 150 ml. MeOH and 200 ml. Et_2O, and the ppt. of 88 g. ergotoxine [illegible] was sepd. by filtration, washed with [illegible] hrs. at [illegible] temp. in the dark. Paper chromatography showed besides I also the presence of [illegible] II, water-sol. alkaloids, and a small amt. of dextrorotatory [illegible] alkaloids. I (50 g.) was dissolved in 130 ml. 80% EtOH, [illegible] g. 85% H_3PO_4 in 65 ml. EtOH, and some crystals of ergotoxine phosphate (III) were added. After 24 hrs. at room temp. in the dark 23 g. crystals of III, m. 181-5°, were sepd., washed with EtOH, then with mixt. Et_2O + EtOH (3:1), and finally with Et_2O 15 hrs., followed by drying at room temp. in the dark. From III (22 g.) by means of $NaHCO_3$ free ergotoxine base (IV) was liberated, extd. with Et_2O, the Et_2O soln. dried with Na_2SO_4, filtered through Al_2O_3, and evapd. in CO_2 atm. The amorphous residue was dissolved in 4 parts hot C_6H_6 and allowed to crystallize; giving 16.3 g. IV, m. 174°, $[\alpha]^{20}_D = -188.7°$ (0.7 in $CHCl_3$), or $[\alpha]^{20}_D = -97.9°$ (0.7 in pyridine). By paper chromatography alkaloids of the ergotoxine group were found and only a small amt. of II. The mother liquor after IV crystn. was evapd. to a small vol., the alkaloids were pptd. with ligroine, the ppt. dissolved in 3 parts of hot EtOAc and allowed to stand 12 hrs. in a refrigerator, giving 6.94 g. white crystal,

1/2



Pitra, J.; Sapara, K.

m. 171°, $[\alpha]_D$ −181.5° (0.8 in $CHCl_3$), or −94.5° (0.8 in pyridine). Paper chromatography showed the presence of alkaloids of the ergotoxine group with high percentage of ergocristine and a small amt. of II. The mother liquor contained as main compd. II

K. M.

c2/2

SAPARGALIYEV, G.; BOLOTOVA, L.M.

New institute. Vest. AN Kazakh. SSR 14 no.4:97-98 Ap '58.
(Academy of Sciences of the Kazakhstan S.S.R.) (MIRA 11:6)

DZHUNUSOV, M.S., prof.; SUZHIKOV, M.M., kand. filos. nauk; KSHIBEKOV, D., kand. filos. nauk; SAPARGALIYEV, G., kand. yurid. nauk; UTAMBETOV, S., kand. filos. nauk; ROZENBERG, TS.R., red.; ROROKINA, Z.P., tekhn. red.

[Laws governing the transition of peoples in formerly underdeveloped contries to socialism; based on the Kazakh people] O zakonomernostiakh perekhoda narodov ranee otstalykh stran k sotsializmu; na primere kazakhskogo naroda. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1961. 225 p. (MIRA 15:2)

1. Akademiya nauk Kazakhskoy SSR. Institut filosofii prava. (Kazakhstan—Economic conditions) (Kazakhstan—History)

Q

USSR/ Farm Animals. Small Horned Stock.

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40467.

Author : Tsoy, L. I., Sapargaliyev, G. S.
Inst : Not given.
Title : The Influence of Different Levels of Feeding on the Productivity of the Fine-Wool Sheep.

Orig Pub: Ovtsevodstvo, 1957, No 8, 36-39.

Abstract: After weaning, 30 young rams of the Soviet Merino breed were divided into three groups of 10 heads each, and were subjected to differential feeding up to 2 years of age. During the whole period of experimentation, the young rams of the 1st group were fed an average of 155 kg. of concentrates, 116 kg. of hay, 78 kg. of silage, 251 kg. of mangel and 148 kg. of skimmilk. The animals of the 2nd group were fed (in kg.): 144, 156, 78, 254, and 133, respectively. The

Card 1/2

SAPARGALIYEV, G.S., kand. yurid.nauk; PAL'GOV, N.N., akad.; BOGATYREV, A.S.; AFANAS'YEV, A.V., prof.; BYKOV, B.A.; SHAKHMATOV, V.F., kand. istor. nauk; POKROVSKIY, S.N., akad.; SAVOS'KO, V.K., kand. istor. nauk; NUSUPBEKOV, A.N., kand. istor. nauk; BAISHEV, S.B., akad.; GOROKHOVODATSKIY, I.S., kand. istor. nauk; AKHMETOV, A., kand. istor. nauk; RAKHIMOV, A., kand. istor. nauk; PIVEN', N.F.; CHULANOV, G.Ch., doktor ekonom. nauk; BOROVSKIY, V.A., kand. ekonom. nauk; SYDYKOV, A.S., kand. pedagog. nauk; ZHANGEL'DIN, T., kand. filos. nauk; KARASAYEV, L.K.; KANAPIN, A.K., kand. istor. nauk; BELENOV, M.D., kand. ekonom. nauk; KARYNBAYEV, S.R., kand. med. nauk; AKHMETOV, K.A.,; SMIRNOVA, N.S., doktor filolog.nauk; SIL'CHENKO, M.S., doktor filolog. nauk; YERZAKOVICH, B.G., kand. iskusstvovedcheskikh nauk; RYBAKOVA, N.; MUKHTAROV, A.I.; BOGATENKOVA, L.I.; KUNDAKBAYEV, B.; SIRANOV, K.S.; SHVYDKO, Z.A., red.; MAMTSOVA, L.B., red.; ZLOBIN, M.V., tekhn. red.

[The Soviet Kazakh Socialist Republic] Kazakhskaia Sovetskaia Sotsialisticheskaia Respublika. Alma-Ata, Kazakhskoe gos. izd-vo, 1960. 477 p. (MIRA 14:6)

1. Akademiya nauk Kaz.SSR (for Pal'gov, Pokrovskiy, Baishev)
2. Chlen-korrespondent Akademii nauk KazSSR (for Bykov, Smirnova, Sil'chenko)

(Kazakhstan)

SAPARGALIYEV, G.S.

Raising and utilizing high-productive ram sires of the Kazakh fine-wool breed. Agrobiologiia no. 3:436-441 My-Je '61. (MIRA 14:5)

1. Yuzhno-Kazakhstanskaya gos. sel'skokhozyaystvennaya opytnaya stantsiya, g. Chimkant.
(Rams)

PAPOROTSKIY, L.A.; DAVYDOV, S.A.; LISITSYN, G.T.; URUMOV, T.M.; SAPARGALIYEV, M.S.; SULEYMANOV, M.S.; AN, M.Ch.

Comment on the article by O.A.Baikomurov and A.F.Kovrigo on "Ways of reducing labor consuming tasks in stopping at the Dzhezkazan Mine." Gor.zhur. no.3:77 Mr '60. (MIRA 14:5)

1. Proizvodstvenno-eksperimental'noye upravleniye Soyuzvzryvproma, Moskva (for Paportotskiy, Davydov). 2. Nachal'nik buro-vzryvnykh rabot Dzhezkazganskogo rudoupravleniya (for Lisitsyn). 3. Nachal'nik shakhty no.51 Dzhezkazganskogo rudnika (for Urumov). 4. Nachal'nik burovzyvnykh rabot shakhty no.51 Dzhezkazganskogo rudnika (for Sapargaliyev). 5. Zamestitel' glav.inzh. shakhty no.51 Dzhezkazganskogo rudnika (for Suleymanov). 6. Starshiy inzh. Instituta gornogo dela AN KazSSR (for An).

(Dzhezkazgan—Stopping (Mining)
(Baikomurov, O.A.) (Kovrigo, A.F.)

BAKAYEV, M.T.; GUBIN, V.I.; SAPARGALIYEV, M.S.

Using straight cuts before drilling with a self-propelled drilling rig. Trudy Inst. gor. dela AN Kazakh.SSR 12:22-29 '63. (MIRA 17:8)

NUGMANOV, N.T.; TLEUZHANOV, K.Kh.; SAPARGALIYEV, M.S.

Results of the observation of the effect of various diameter boreholes on blasting indices. Trudy Inst. gor. dela AN Kazakh. SSR 12:151-154 '63. (MIRA 17:8)

1. Dzhezkazganskiy rudnik (for Nugmanov, Tleuzhanov). 2. Institut gornogo dela AN Kazakhskoy SSR (for Saparqaliyev).

S/048/62/026/011/004/021
B125/B102

24.7700

AUTHORS: Spivak, G. V., Saparin, G. V., and Pereverzev, N. A.

TITLE: The potential distribution found in a p-n junction by means of an electron-optical raster system

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 11, 1962, 1339-1342

TEXT: The authors discuss the possibility of visualizing the junction and of quantitatively measuring the range of the potential in p-n junctions of germanium and silicon single crystals directly and quickly, using an electron beam that scans over the surface. The method is based on the following assumptions: (1) The radius of the scanning beam has to be smaller than the width of the p-n junction; (2) the potential drop in the junction must be greater than the mean energy of the secondary electrons. The accuracy of the method in weak fields can be improved by reducing the electron energy and when the radius of the electron probe is reduced, the method can be applied to measuring potentials of thin junctions. The width of the junction can also be determined by varying the blocking

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voltage. The potential distribution of a p-n junction is determined with the integrating circuit (12) and the oscilloscope (13) (Fig. 1). If the blocking voltage is given, the width of the junction determined by the electron-optical method is 25-30% greater than that measured with a micromanipulator. The method described here furnishes data on the dependence of the electrical structure of a p-n junction on various factors. The device displays 600 scanning lines and supplies 50 frames per sec. There are 7 figures.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gos. universiteta im. M. V. Lomonosova (Physics Division of the Moscow State University imeni M. V. Lomonosov)

Fig. 1. Block diagram of the electron-optical raster system.
Legend: (1) electron gun; (2) anode cylinder; (3)-(4) magnetic lenses; (5) deflecting coils; (6) object; (7) collector; (8) amplifier; (9) the deflecting coils in the circuit of the electron probe are connected in series to the kinescope; (11) kinescope.

SPIVAK, G. V.; SAPARIN, G. V.; MASSARANI, B.; BYKOV, M. V.

"Der Kontrast des Bildes des p-n Uberganges in dem Rastelektronenmikroskop."

report submitted to 3rd European Regional Conf, Electron Microscopy, Prague, 26 Aug-3 Sep 64.

L 36553-66 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015759 (A,N) SOURCE CODE: UR/0048/66/030/005/0761/0763

AUTHOR: Spivak, G. V.; Saparin, G. V.

ORG: Physics Department, Moscow State University im. M.V.Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Investigation of p-n junction by means of a scanning microscope with electron and ion bombardment of the semiconductor specimen /Report, Fifth All-Union Conference on Electron Microscopy held in Sumy 6-8 July 1965/

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v. 30, no. 5, 1966, 761-763

TOPIC TAGS: electron microscope, ion microscope, silicon diode, pn junction, secondary electron emission

ABSTRACT: Back biased p-n junctions in silicon have been observed with an ion scanning microscope, and the results have been compared with the results of similar observations with an electron scanning microscope. The use of ion scanning was undertaken because the secondary electrons due to ion bombardment have much lower energies than those due to electron bombardment, and are accordingly much more sensitive to field irregularities at the surface of the specimen. The ions were produced in a cold cathode glow discharge in air. The optical system was designed to produce a 1 μ diameter scanning beam at the specimen, but the actual diameter of the scanning spot turned out

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ACC NR: AP6015759

to be 10-15 μ; this is ascribed to scattering of the ions by the residual gas in the instrument and to velocity straggling of the ions. The ion beam was caused to scan the specimen by two pairs of deflecting plates, which were synthronized with the deflecting coils of a kinescope. The secondary electrons from the specimen were collected by a 15 kV electrode, and the resulting signal was displayed on the kinescope. The silicon p-n junction appeared on the kinescope as a narrow dark region with a light border, or as a narrow light region with a dark border, depending on whether the n or the p region of the crystal was inclined toward the collector. The contrast of the image of the p-n junction increased with increasing back bias. At high bias potentials the contrast of the ion scanning microscope image was about the same as that of the electron scanning microscope image, but at low bias potentials the contrast of the ion scanning image was greater than that of the electron scanning image. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 006

Card 2/2 MLP

L 36559-66 EWT(1) IJP(c) GG

ACC NR: AP6015767 (A,N) SOURCE CODE: UR/0048/66/030/005/0787/0788

34

AUTHOR: Saparin, G. V.; Spivak, G. V.

B

ORG: Physics Department, Moscow State University im. M.V.Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Observation of the process of surface charging of dielectrics by means of a scanning electron microscope /Report, Fifth All-Union Conference on Electron Microscopy held in Sumy 6-8 July 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 787-788 and inserts

TOPIC TAGS: electron microscopy, surface charge, teflon, mica, plastic

ABSTRACT: The build up of surface charge on teflon, mica, and plastic surfaces was observed with a scanning electron microscope. The surface of the specimen became negatively charged as a result of the presence of the scanning beam. This surface charge was allowed to build up repeatedly until breakdown occurred while a motion picture record was made of the image on the kinescope. Thus it was possible to observe the full complex dynamics of the process. A number of frames from the motion picture record are presented. It was noticed that the surface charge tended to move preferentially along artificial scratches on the surface of the specimen. It was hypothesized that certain rope-like structures observed on some of the micrographs represent

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ACC NR: AP6015767

regions of high potential gradient. To test this hypothesis the specimen was so shifted after having been scanned, that the region busequently scanned included a portion of the previously scanned region as well as fresh surface. The appearance of the rope-like structures along the boundary between the previously scanned and the fresh regions and the subsequent motion of these structures is regarded as confirming the hypothesis.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 001/ OTH REF: 002

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L 36329-66 EWT(1)/T IJP(c) AT

ACC NR: AP6015791 (A,N) SOURCE CODE: UR/0048/66/030/005/0881/0883

AUTHOR: Spivak, G.V.; Saparin, G.V.; Stepanov, S.S.

64
B

ORG: none

21

TITLE: Observation by means of a scanning electron microscope of p-n junctions subjected to a small alternating bias [Report, Twelfth All-Union Conference held in Leningrad 22-26 October 1965]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 881-883

TOPIC TAGS: electron microscopy, silicon diode, pn junction, amplitude modulation, electron beam, resonant amplifier.

ABSTRACT: A modified technique was employed to observe the p-n junction of a diffused silicon diode with an electron scanning microscope. A small ac bias (1070 Hz) was applied to the diode and the usual wide band video amplifier was replaced by a band pass amplifier tuned to the bias frequency and having a pass band of about 2 Hz. The silicon diode was so mounted that the probe beam (1 micron in diameter at the object) moved perpendicularly to the junction. Oscilloscope traces of the signal developed during a single passage of the scanning beam (scanning time, 10 sec) are presented, as well as two-dimensional images recorded with a resolution of 60 lines and a scanning time of 3 sec/line (180 sec/frame). Images of the unbiased and dc biased diode re-

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ACC NR: AP6015791

corded with a resolution of 300 lines and a scanning rate of 50 frame/sec, using the conventional video amplifier, are presented for comparison. The position of the junctions was clearly marked on the oscilloscope trace when the bias potential was only 0.01 V, and it was very prominent when the bias was 0.05 V. When the bias potential was very low the oscilloscope record of the junction was asymmetric; this is discussed briefly. On the two-dimensional images of the ac biased diode (bias potentials 0.025 and 0.25 V) the junction appeared as two bright bands some 25 microns apart separated by a darker region. Other details of these images are ascribed to geometric features of the crystal surface. It is concluded that the use of supplementary modulation of the video signal together with a resonant amplifier increased the sensitivity to microfields of the scanning microscope by two or three orders of magnitude. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 003/ OTH REF: 008

Card 2/2

SAPARIN, V.

Glavnyi Turkmenskii kanal. /The Main turkmen Canal/. Foto Z. Vinogradova. (Vokrug sveta, 1950, no. 11, p. 2). DLC: G1,V6

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

1. SAPARIN, V.

2. USSR (600)

4. Galaktionov, Vasilii

7. "Beginning of a great project." V. Galaktionov, A. Agranovskiy. Reviewed by V. Saparin. Vokrug sveta no. 10, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

SAPARIN, V.

In the depths of the Gobi Desert ("In search of dinosaurs in the Gobi." A.K.Rozhdestvenskii. Reviewed by V.Saparin). Vokrug sveta no. 7:58-60 Jl '54. (MLRA 7:8)
(Gobi) (Rozhdestvenskii, A.K.)

SAPARIN, V.

Nature and people. Vokrug sveta no.11:12-15 N '55. (MLRA 9:1)
(Geography, Economic)

SAPARINA, Ye.

Palace built by water. Znan.sila 30.no.8:17 Ag'55. (MLRA 8:11)
(Caves)

SAPARINA, Ye.

On the world's highest summit. Znan.sila 31 no.1:27-28 Ja '56.
(Mount Everest expedition, 1953) (MLRA 9:4)

SAPARINA, Ye.

Three "respirations" of the Earth. Znan.sila 31 no.3:6-10 Mr '56.
(Earth--Internal structure) (MLRA 9:7)

SAPARINA, Ye.

4-5-5/17

SUBJECT: USSR/New Printing Method

AUTHOR: Saparina, Ye.

TITLE: Flying Letters (Letayushchiye bukvy)

PERIODICAL: Znaniye - Sila, May 1957, #5, pp 21-23 (USSR)

ABSTRACT: The article conveys an interview with Ivan Josifovich Zhilevich, senior instructor of the Vilniyus Pedagocial Institute (Lithuania) who invented an electrostatic and an electromagnetic printing method. The inventor holds already six other patents on automatics and telemechanics.

For the electromagnetic printing method, the inventor used the fact that the sound track on a magnetophone tape may be made visible by a paint consisting of iron compounds. For printing purposes, the text is "written" on a magnetophone tape by a phototelegraph system. This tape becomes the printing form enabling to make any number of copies. In order to transmit the recorded information on paper, the magnetophone tape is placed on a drum and covered by another paper tape. The magnetic field permeates the paper to which dry, metallic paint is applied by means of a special container. It is necessary to warm the

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TITLE: Flying Letters (Letayushchiye bukvy)

paper to some extent in order to make the paint stick to the paper which otherwise would be rubbed off easily.

During the winter of 1955/56, the Institute of Automation and Telemechanics of the USSR Academy of Sciences and the Leningrad Polytechnical Institute passed a positive judgement on the invention. In the summer of 1956, Zhilevich reported his invention to the Scientific Research Institute of Polygraphic Machinebuilding in Moskva.

The electrostatic printing method is supposed to be an improvement of the electromagnetic method, since printing is to be achieved without the use of magnetic tape. Zhilevich used the information on researches of the American scientists Greig and Young, who had observed that ordinary art printing paper is electro-photo-sensitive by itself, since the zinc white contained in it serves as a semiconductor which abruptly changes its conductivity when exposed to light. Zhilevich tried many substances having semiconductor properties and preserving electrical charges to a greater extent than it was the case with zinc white. By chance, ordinary glue "БФ-2" was tested and found to

TITLE: Flying Letters (Letayushchiye bukvy)

be useful. The functioning of the electrostatic printing method is explained by means of an experiment and it is mentioned that a model of an electrostatic printing machine has been planned and is under construction.

Further, the article indicates the possibilities of application of the new printing methods.

The article contains 8 pictures.

ASSOCIATION: 1) Pedagogicheskiy institut, Vilniyus (Pedagogical Institute at Vilniyus). 2) Institut avtomatiki i telemekhaniki Akademii Nauk SSSR (Institute for Automation and Telemechanics of the Academy of Science USSR).

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 3/3

SAPARINA, Ye.

4-6-7/30

AUTHOR: Saparina Ye.

TITLE: What Puts the Brake on the Earth? (Chto tormozit zemlyu?)

PERIODICAL: Znaniye - Sila, 1957, # 6, p 10-11 (USSR)

ABSTRACT: The author describes methods of measuring the earth's movement, done previously by mechanical clocks which were kept in deep vaults to ensure their exact functioning. This method was not precise enough as the pendulum oscillations were subject to the pull of gravity. Therefore the pendulum was replaced by a quartz plate, oscillating by alternating current. These oscillations, more stable than the pendulum vibrations, do not depend on exterior conditions.

Then, two English astronomists, Pavei and Wink (Uink) observed that the quartz clock of the Potsdam Geodesic Institute did not work regularly; it was slow in autumn and fast in spring. The same phenomenon was observed at the Paris and Washington chronometric service. The noted British astronomer Spencer Johns stated at the Paris International Congress in 1950, that the Greenwich quartz clock showed these same irregularities in autumn and spring. This led to the conclusion that the rotation of the Earth itself caused the

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phenomena, being faster in August and slower in March and April. This irregular movement does not only occur during the year but also over the centuries. Due to this delay an astronomical day was protracted by 0,002 seconds each century over the last 2,000 years.

The Earth's speed also suddenly increases or decreases according to no established law. The cause of this brake to the Earth's movement was the subject of a number of investigations, in particular, those of the Soviet geophysicist N.Pariyskiy. Tables were composed from which it appeared that the three observed irregularities in the Earth's rotation resulted from three different causes.

The first cause was thought to be the Antarctic Continent. It was supposed that an increase in the ice cover could influence the earth's movement over centuries, which supposition would not be theoretically wrong. Exploration of the Antarctic proved, however, that the ice cover is melting instead of increasing.

For a long time the moon was suspected of delaying the Earth's movement by causing the tides. But calculations showed

 that these forces were not to blame. This question remains

open and will be studied during the Geophysical Year.

As regards the speed alterations of the Earth, most of the scientists consider that it is caused by processes inside the Earth. English scientists stated the hypothesis that the irregular oscillations in the Earth speed are due to the recrystallization processes of plutonic rocks. Other scientists believe that they may depend on alternating speeds of currents beneath the crust. Soviet scientists adhere to the first theory, and state that on the basis of calculations recrystallizations at a depth of 80 km would cause a change in the inner Earth structure and in such a way cause alterations in its speed. These changes may be observed on the surface through gravity oscillations. Research on this subject is conducted at the Institute of Earth Physics of the Academy of Sciences. They are very important and will include the whole globe during the Geophysical Year.

The yearly irregularities of the Earth's speed were explained in a rather surprising way. Jeffries, an English physicist, calculated the amount of water removed by the oceanic currents, the weight of grass and leaves, the amount of falling and melting snow, the weight of winds and stated

that the weight of air brought onto the continent through monsoons during the winter and flowing to the ocean in summer is equal to 300,000,000,000,000 tons. I. Monin, a Soviet scientist, stated that 31 sq km, of rocks are yearly washed from the Earth's surface. The shifting of these enormous weights disturbs the rythm of the Earth mechanism, the Earth axis deviates and the center of gravity is displaced. As a result the speed of movement changes. It was stated, more or less definitely that the wind is putting the brake on the Earth's movement. N. Pariyskiy considers that the seasonal transference of air masses is the most important cause of the slower movement.

These investigations are not only of theoretical importance. The speed of the Earth's rotation influences for instance, the amount of Coriolis force (which causes the deviation of rivers in the northern hemisphere to the right hand side and those of the southern hemisphere to the left hand side); it has also an influence on sea currents, winds, the flight of missiles and railroad transport movements.

I. Maksimov a Soviet scientist stated recently that the increasing temperatures observed during the last years depend on

4-6-7/30

What Puts the Brake on the Earth?

the alteration of Coriolis forces, affecting atmospheric circulation. This alteration was caused by a slower Earth rotation.
There are 5 sketches.

AVAILABLE: Library of Congress

Card 5/5

SAPARINA, Ye.

Assault on the fortress beyond the clouds ("The ascent of Everest" by John Hunt. Reviewed by E.Saparina). Znan.sila 32 no.2:41 F '57. (MLRA 10:5)

(Mount Everest Expedition, 1953)

SAPARINA, Ye. (MLRA 10:8)

Yogi. Znan. sila 32 no.7:21-24 Jl '57.
(Yoga, Hatha)

SAPARINA, Ye

4-1-11/19

AUTHOR: Saparina, Ye.

TITLE: The Ordinary and the Mysterious (Obyknovennyy i zagadochnyy)

PERIODICAL: Znaniye - Sila, 1958, # 1, pp 34 - 37 (USSR)

ABSTRACT: This is a report on research conducted at the Snow and Ice Laboratory of the Moscow University. There are at least ten different types of snow, and scientists confirm that different localities have different types of snow. For example, snow in Central and East Siberia is not as dense as snow in the Baltic area. Snow in the far North is as hard as fluorspar snow in the Antarctic; in a few days it becomes so solid that it can hardly be moved by a powerful bulldozer.

The author then deals with avalanches and methods of removing snow by spraying it from airplanes with coloring substances which cause an early thawing.

AVAILABLE: Library of Congress

Card 1/1

SOV-4-58-7-2/22

AUTHOR: Saparina, Ye.

TITLE: Crossing the Magnetic Meridians (Peresekaya magnitnyye meridiany)

PERIODICAL: Znaniye - sila, 1958, Nr 7, pp 1-4 (USSR)

ABSTRACT: The author gives general data on the magnetism of the earth and states that solutions for the many still unsolved problems in this field can only be found with the help of artificial sputniks. In this connection, the names of the following scientists are mentioned: V.Pochtarev, Ya. Gakkel'. There are 13 caricatures.

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SAPARINA, Ye.

Celestial geodesist. Znan. sila 33 no.3:30-34 Mr '58. (MIRA 11:4)

(Earth--Figure)
(Artificial satellites)

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Saparina, Yelena Viktorovna

Nebesnyy zemlemer (Celestial Surveyor). [Moscow] Izd-vo TsK VLKSM "Molodaya gvardiya," 1959. 198 p. 50,000 copies printed.

Ed.: N. Samarskaya; Tech. Ed.: N. Mikhaylovskaya.

PURPOSE: This book is intended for the young or general reader interested in astronomy and geodesy.

COVERAGE: The book presents a popular account of efforts to measure the Earth and to define its shape, and of the research, achievements, and speculations in this field. Some related problems connected with the Moon and with artificial satellites are also discussed. No personalities are mentioned. No references are given.

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Contrary to What the Terrestrial Globe Shows 3

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S/004/60/000/03/02/005

3.9000

AUTHOR: Saparina, Ye.

TITLE: Corona of the Globe

PERIODICAL: Znaniye-Sila, 1960, No. 3, pp. 34 - 39

TEXT: The author describes the research and events which led to the discovery that our globe is also surrounded by a corona. Professor V.I.Krasovskiy attached his instruments to the outside of the third Soviet Sputnik. The equipment recorded only electrons of many kev. The Corresponding Member of the Academy of Sciences, S.N.Vernov, placed his instruments inside of the same Sputnik. Although electrons could not penetrate through the solid walls of the satellite, the braking of their movement resulted in x-radiation which was recorded by instruments. At the 5th Assembly of the MGG (International Geophysical Year), held in September 1958 in Moscow, Soviet scientists reported that x-radiation was recorded at a distance of 250-500 km from the earth, and that the intensity of the electronic current was extraordinarily high. Thus, the earth is surrounded by a belt of powerful electrons which increase towards the equator. They produce x-radiation upon reaching the atmosphere and this radiation is the corona of the earth. Scientists differ in opinion as to the origin of these charged particles.

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S/004/60/000/03/02/005

Corona of the Globe

Members of the Section of Upper Atmosphere of Institut fiziki i atmosferi Akademii nauk SSSR (Institute of Physics and Atmosphere of the AS, USSR) and its head Professor Valerian Ivanovich Krasovski state that the appearance of electrons is caused by the sun. Professor Sergey Nikolayevich Vernov is of the opinion that the corona is caused by a corpuscular radiation of the earth. At the annual meeting of Sektsiya fiziki i matematiki (Section of Physics and Mathematics) S.N. Vernov drew attention to the results obtained by experimental globes which were shot into space from Murmansk and Dolgoprudnaya near Moscow during the IGY. They showed that at least once a year relatively high-energy particles emerge from cosmic space.

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SAPARINA, Ye.

"Earth surveyor in the skies" by E.Saparina. Nauka i zhizn' 27 no. 4:76 Ap '60. (MIRA 14:5)

(Earth—Figure)

SAPARINA, Ye.

Earth's corona. Zman.sila 35 no.3:34-35 Mr '60. (MIRA 13:6)
(Particles (Nuclear physics))
(Atmosphere, Upper)

SAPARINA, Ye.

Teaching machines. Znan.sila 35 no.9:23-27 S '60. (MIRA 13:10)
(Cybernetics)

SAPARINA, Ye.

Machine diagnosis. Znan. sila 35 no. 12:32-34 D '60.
(MIRA 13:12)

(Diagnosis) (Cybernetics)

SAPARINA, E.

White spots on the cerebral cortex. Prir i znanie 14 no.5:6-10 My '61. (EEAI 10:9/10)

(CEREBRAL CORTEX)

21382

27.0000 L1112

S/004/61/000/006/003/005
D231/D304

AUTHOR: Saparina, Ye.

TITLE: Transmitters outside and within us

PERIODICAL: Znaniye-sila, no. 6, 1961, 34 - 35

TEXT: The author briefly discusses certain aspects of the application of manufactured and natural transmitters in the field of physiology. In a recent experiment it was shown that approximately 50 mg. of blood flowed into the brain of a man as he was solving an arithmetical problem. The effects on the functioning of his brain were studied by means of minute transmitters-- devices consisting of quartz crystals, electromagnets and photoelements. The applications of transmitters have been known to engineers for some time, but it is only recently that they have been used for studying living organisms. The utilization of transmitters represents an advance on the more conventional methods of investigating and measuring

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Transmitters outside and ...

pulse, heart and muscle movements. Electronics plays the all-important role in collecting, amplifying and recording electric signals induced by rhythmic contractions of the heart, respiratory movements of the chest and invisible vibrations of muscular fibers. After describing the main measuring apparatus, the author points out that its effectiveness was recently demonstrated in a factory when the great difference between the working movements of a skilled turner and those of a new apprentice was detected by such transmitters. Moreover, it is also possible to utilize transmitters for studying the effects of heart constrictions -- e.g. the displacement of the center of gravity of the chest during each successive heart-beat. After an elementary description of the human nervous system, it is pointed out that biochemists have long wished to find out what takes place in a molecule during its chemical conversion and to observe all the vicissitudes of these minute particles of matter. Ideally, this could be accomplished by placing transmitters at different points on the molecules as is done by biologists when studying human

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Transmitters outside and ...

organs that are inaccessible to direct observation. Such minute transmitters, however, cannot be constructed, but it is possible to utilize the so-called free electrons present in living molecules for this purpose. These free electrons, which resemble tiny magnets, are noted in the debris of many molecules and are the result of the rupture of molecular bonds. Thus, the fate of molecules may be ascertained by probing these unusual "transmitters" with a ray from a special apparatus [Abstractor's note: Not described]. If the molecules near the "transmitters" are unbroken or have no identifiable sign, the recording screen remains blank. Should the ray, however, come into contact with any free electrons, signals are transmitted onto the screen, and data is hence obtained on processes taking place within the human body. There are 3 figures.

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SAPARINA, Ye.

White spots on the brain chart. Znan.sila 36 no.1:10-13 Ja '61. (MIRA 14:3)

(Brain) (Cybernetics)

SAPARINA, Ye.

"Tortila-2" makes a decision. Znan.sila 36 no.3:42-43 Mr '61.
(MIRA 14:3)

(Cybernetics)

SAPARINA, Yelena Viktorovna; ANTONYUK, L., red.; KUVYRKOVA, L., tekhn. red.

[Cybernetics inside of us] Kibernetika vnutri nas. Moskva, Izd-vo "Molodaia gvardiia," 1962. 302 p. (MIRA 16:3)
(Cybernetics)

SAPARINA, Ye.

And the machine answered... Znan.-sila 37 no.10:29-32 O '62.
(MIRA 16:1)

(Cybernetics) (Brain--Localization of functions)

SAPARINA, Ye.

Here is a neuron! Znan.-sila 37 no.8:20-23 Ag '62. (MIRA 16:5)
(BRAIN)

SAPARINA, Ye.

Is it a calculating machine. Znan.-sila 37 no.12:34-37 D '62. (MIRA 16:2)

(Cybernetics)

SAPARKIN, N. Ya.

Medicine, Rural

Plan of activities of a rural medical and obstetric station,
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